



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/614,008 | 07/08/2003 | Shinji Murashige | 43888-255 | 9527 |
| 7590 | 05/10/2006 | | | EXAMINER |
| MCDERMOTT, WILL & EMERY 600 13th Street, N.W. WASHINGTON, DC 20005-3096 | | | | FANTU, YALKEW |
| | | | ART UNIT | PAPER NUMBER |
| | | | | 2838 |

DATE MAILED: 05/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/614,008 | MURASHIGE ET AL. | |

| | |
|-----------------|-----------------|
| Examiner | Art Unit |
| Yalkew Fantu | 2838 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 03 April 2006.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-10 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-10 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 03 April 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US 5,294,496) in view of Okumura (US 5,608,304).

With respect to claims 1 and 10, Sato discloses a portable power source (Fig. 1 and Col. 1 line 46-48), comprising a battery pack for accommodating at least one secondary battery (Fig. 1 and Fig. 4A element 12), and a mounting part for mounting said battery pack (Fig. 4A element 10 and Col.1 line 22-24). Said mounting part comprising a protruding terminal (Fig. 4A element 14) for connecting with terminals (Fig. 4A element 14 and 16) being disposed in a concealed disposition (Col. 2 item 51, Fig. 4A items 18 and 24, Col. 2 line 49-52). Said battery pack (Fig.4A element 12) being movable (Col. 2 elements 53-54) from an initial position to a fixing position. Said external terminal has been inserted and connect at fixing position (Figs. 4A and 4B elements 18,24,22 and 26); and inserting direction is directly opposite to the direction implied by slidable from the initial to the final position. (See Fig. 4A, directions designated by arrows "a" and "b").

With respect to claim 2, Sato further discloses portable power source in accordance with claim 1, wherein said charge and discharge terminal comprise both positive and negative terminals (Col.2 line 39-46).

With respect to claim 5, Sato teaches portable power source in accordance with claim 1, wherein said discharge part does not comprise a current regulating device (Fig. 4A, 4B)

Okumura, however, teaches a battery pack comprising a charging circuit (Col. 1 line 64) and a control circuit (Fig. 1 element 45).

Sato and Okumura are analogous art, because they are from the same field of endeavor namely a battery pack and apparatus using the battery pack.

At the time of invention it would have been obvious to a person of ordinary skill to provide a charging and controlling circuit to Sato's portable power apparatus, as taught by Okumura, which would charge and control the charging activities.

The suggestion or motivation for doing would have been that the charging circuit charges the battery pack to maintain the power use and the charge controlling circuit controls voltage and current during charging to avoid overcharging.

Therefore it would have been obvious to combine Sato with Okumura for the benefit of having a portable battery pack with rechargeable power source as specified in claim 1.

With respect to claim 4, Sato discloses the portable power source in accordance with claim 1 as set forth above, however, doesn't disclose expressly wherein said charge circuit further comprise a thermal protector.

Okumura, however, discloses a thermal protector, such as a thermal fuse (Fig. 2 element 42 and col.2 lines 13 and 17).

Sato and Okumura are analogous art because they are from the same field of endeavor namely portable power and battery protection circuit.

At the time of the invention it would have been obvious to a person of ordinary skill to provide the portable power apparatus of Sato with a thermal protector as taught by Okumura.

The suggestion or motivation for doing would have been that the use of this thermal protector is to safeguard the battery power circuit from being damaged by excessive heat produced at the result of too much charge as taught by Okumura in col. 2 lines 13-18.

Therefore it would have been obvious to combine Okumura with Sato for the benefit of forming portable power source with a thermal protector to obtain the invention as specified in claim 4.

Claims 3, 6, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US 5,608,304) in view of Nagano et al (US 5,872,444).

With respect to claim 3, 6 and 7, Sato discloses a portable power source in accordance with claim 1 as set forth above in the 35 USC 103 rejection above, however, does not disclose expressively that the portable power source has a thermistor, and a lithium-ion secondary battery.

The Nagano et al. reference, however, discloses a power source with a thermistor and a lithium-ion secondary battery.

With respect claim 3, Nagano et al. discloses a thermistor (Col. 9 line 28)

With respect to claim 6, Nagano et al discloses a positive terminal (TM1+) and a negative terminal (TM1-) charging of the battery-charging device, which is not concealed. (Fig. 1; col. 3 number 38-41)

With respect to claim 7, Nagano et al. discloses lithium-ion batteries (col. 1 line 11).

With respect to claim 8 Nagano et al. discloses the portable power source for different electronics (Col. 1 line 7 and 8).

Sato and Nagano et al. are analogous art because they are from the same field of endeavor, namely portable power source.

At that time of the invention, it would have been obvious to a person of ordinary skill in the art, to have added a thermistor, charge terminals not concealed, a lithium-ion battery, and power source for electronic devices to the "portable electric power apparatus" of Sato in view of the teachings of Nagano et al.

The suggestion and motivation for doing so would have been obvious in view of the teaching of Nagano et al. in Col. 9 line 28 by adding a thermistor to the portable electric power apparatus it could be used to detect the temperature of the batteries during charging before exposed to an over-heating damage.

In addition to that, as in view of Nagano's teaching in Col. 1 line 11, by adding a lithium-ion battery type it could also be advantageous to use the power apparatus relatively for longer period of time.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Sato's apparatus and include a

temperature sensor as disclosed by Nagano et al. in order to avoid such a temperature-dependent irreversibility deterioration of the battery.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US 5,294,496) in view of Haga et al. (US 2003/0085686).

With respect to claim 9, the new claim added, Sato discloses a portable power source in accordance with claim 1 cited above, however does not disclose expressly that the battery pack being rotatable from the initial position to the fixing position.

Haga reference discloses battery pack (Fig. 11, 60) being rotatable (0073) from the initial position to the fixing position (Fig. 11, 60d).

Sato and Haga et al. are analogous art because they are from the same field of endeavor, namely battery pack and electronic apparatus.

At the time of the invention, it would have been obvious to a person of ordinary skill to in the art to provide a battery pack being rotatable to the electronic apparatus of Sato in view of the teachings of Haga et al. the suggestion for doing so would have been obvious in view of the teachings of Haga et al. in page 7 paragraph 73 that by adding a rotatable battery pack to the electronic apparatus of Sato the battery terminals can be easily protected.

Response to Arguments

Applicant's arguments with respect to claims 1-8 filed on 04/03/2006 have been fully considered but they are not persuasive.

Regarding claim 1, Sato discloses a portable power source (Fig. 1 and Col. 1 line 46-48), comprising a battery pack for accommodating at least one secondary battery

(Fig. 1 and Fig. 4A element 12), and a mounting part for mounting said battery pack (Fig. 4A element 10 and Col.1 line 22-24). Said mounting part comprising a protruding terminal (Fig. 4A element 14) for connecting with terminals (Fig. 4A element 14 and 16) being disposed in a concealed disposition (Col. 2 item 51, Fig. 4A items 18 and 24, Col. 2 line 49-52). Said battery pack (Fig.4A element 12) being movable (Col. 2 elements 53-54) from an initial position to a fixing position. Said external terminal has been inserted and connect at fixing position (Figs. 4A and 4B elements 18,24,22 and 26).

But applicant argues that, Sato, reference cited by the examiner "is NOT movable". Sato reference, however discloses that it is slidable from initial position to final as described in the associated drawing of Sato (sliding motion directed by the arrow in Fig. 4A, b).

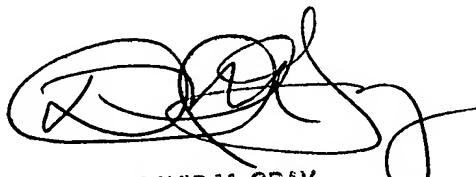
In addition to that, Sato also discloses inserting direction is directly opposite to the direction implied by slidable from the initial to the final position. (See Fig. 4A, directions designated by arrows "a" and "b") in replay to applicant's new added claim 10.

Final necessitated by amendment.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yalkew Fantu whose telephone number is 571-272-8928. The examiner can normally be reached on (M-F);(8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David M. Gray can be reached on 571-272-12119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DAVID M. GRAY
PRIMARY EXAMINER